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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,790	06/27/2003	Qun-Zong Wu	ASI 125	5018

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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT PAPER NUMBER

3628

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/606,790

Applicant(s)

WU ET AL.

Examiner

Akiba K. Robinson-Boyce

Art Unit

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/14/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

1. Due to communications filed 6/27/03, the following is a non-final first office action. Claims 1-6 are pending in this application and have been examined on the merits. Claims 1-6 are rejected as follows.

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3 and 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 7 of U.S. Patent No. 6,705,521. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims disclose an automatic car toll paying method that employs cellular communications to enable automatic billing for tolls.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny (US 2002/0188575 A1).

As per claim 1, Freeny discloses:

calling a specific number representing a log in of an automatic charging through an on-vehicle cellular communication equipment before a car enters a toll road or bridge and hanging up, [0028], shows communication call charges

to a billing data processing center, w/ [0030], shows entry of phone numbers/personal information codes for use with proximity service features , where the toll gate is the proximity service); and

calling a specific number representing a log out of said automatic charging through said cellular phone in said car after leaving said toll road or bridge, ([0045], shows an example of a grocery store, but is obvious to use in a toll booth application since the AWP system is used for both applications, where the product code is entered at the checkout station representing completion of the user's transaction. In the case of a toll booth, the product code would be replaced with phone numbers/personal information codes entered into the AWP for checkout of a vehicle);

wherein said on-vehicle cellular communication equipment has been logged in automatic charging when said car enters cell governing area of a communication coverage covering a toll station, a cellular base station will inform a billing center to automatically chargeback from an account connected to said on-vehicle cellular communication equipment or record said toll of said car, [0048], lines 1-12, shows use of AWP (Advance Wireless Phone/Pager) unit with a toll booth, where the personal information code is transferred to the toll booth for automatic accounting of the toll both charges).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use the toll booth application in a checkout station scenario with the motivation of utilizing the AWP system to ensure that the toll payment is complete.

Art Unit: 3628

5. Claims 2, 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny (US 2002/0188575 A1), and further in view of Claus et al (US 5,310,999).

As per claim 2, Freeny does not specifically disclose the following, but does disclose completing a toll booth payment in [0048].

However, Claus et al discloses:

wherein said billing center will transmit a successful-payment message to said on-vehicle cellular communication equipment through said cellular base station to be an electronic toll payment authorization if said account or said record is completed, (Col. 8 lines 43-55, successful transaction concludes with a yellow light of a transponder turning off based on the information in a decrypted message). Claus et al discloses this limitation in an analogous art for the purpose of showing that upon successful debiting of a smart card, indication of a successful transaction is made).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to transmit a successful-payment message with the motivation of providing an indication that the vehicle has successfully paid the toll.

As per claim 3, Freeny does not specifically disclose the following, but does disclose completing a toll booth payment in [0048].

However, Claus et al discloses:

wherein said toll road or bridge further comprises an inspection location having one or more automatic photographing devices for recognizing a license plate, and when said car passes through said inspection location, said electronic toll payment authorization is transmitted to a short wireless signal

Art Unit: 3628

receiving device in said inspection location through an on-vehicle wireless DSRC (Dedicated Short Range Communication) transmitter, and if said electronic toll payment authorization is not transmitted to said inspection location by said car, said license plate of said car will be recognized by said one or more automatic photographing devices and an image representing said car passing said inspection location and a vehicle identification number of said car will be an evidence for processing a toll supplying, (Col. 4, line 67-Col. 5, line 1, shows use of camera taking a picture of a license plate). Claus et al discloses this limitation in an analogous art for the purpose of determining if a vehicle made a proper payment.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to transmit a successful-payment message with the motivation of providing an indication that the vehicle has successfully paid the toll.

As per claim 4, Freeny discloses:

wherein said on-vehicle wireless DSRC (Dedicated Short Range Communication) transmitter and said short wireless signal receiving device are microwave communication media, ([0005], shows use with microwave systems).

As per claim 6, neither Freeny discloses:

wherein said on-vehicle cellular communication equipment employs a hot key conveniently to call said specific number representing said log in or said log out of said automatic payment, ([0051]-[0052], shows user uses the AWP to select a local telephone code for dialing, it shows telephone codes stored in memory of a computer program telephone dialing system, where once the AWP unit is located, the stored

Art Unit: 3628

number, along with a predetermined prefix, such as the number one and area code are dialed, in this case, the actual "hot key" is obvious with Freeny since the user uses the AWP, which has key selections to dial a specific number stored for payment purposes).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to employ a hot key conveniently to call said specific number with the motivation of allowing a user to quickly dial a specific number for processing the toll payment.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny (US 2002/0188575 A1), and further in view of Claus et al (US 5,310,999), and further in view of Schofield et al (US 2006/0220817 A1).

As per claim 5, neither Freeny, nor Claus et al disclose the following, however, Freeny shows use of AWP (Advance Wireless Phone/Pager) unit in a toll booth application in [0048], lines 1-12.

However, Schofield et al discloses:

wherein said on-vehicle wireless DSRC (Dedicated Short Range Communication) transmitter and said short wireless signal receiving device are infrared communication media, ([0113], infrared communications). Schofield et al discloses this limitation in an analogous art for the purpose of showing that infrared communications are used with an automated vehicle system.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize infrared communication media with the motivation of providing means that will communicate effectively in the toll system.



**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 9am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A handwritten signature in black ink, appearing to read 'A. R. B.', with a stylized flourish extending from the end.

A. R. B.  
October 24, 2006